Complete Summary

GUIDELINE TITLE

Counseling about proper use of motor vehicle occupant restraints and avoidance of alcohol use while driving.

BIBLIOGRAPHIC SOURCE(S)

U.S. Preventive Services Task Force. Counseling about proper use of motor vehicle occupant restraints and avoidance of alcohol use while driving: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med 2007 Aug 7;147(3):187-93. PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: U.S. Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Baltimore (MD): Williams & Wilkins; 1996. Chapter 57, Counseling to prevent motor vehicle injuries. p. 643-58. [201 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Motor vehicle occupant injuries (MVOIs)

GUIDELINE CATEGORY

Counseling
Prevention

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Nursing
Obstetrics and Gynecology
Pediatrics
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

- To systematically review evidence for the effectiveness of counseling populations of any age in primary care about the proper use of restraints in motor vehicles to prevent injury, as well as evidence on the impact of primary care counseling to prevent alcohol-related motor-vehicle occupant injuries (MVOIs) in adolescents and adults
- To update the 1996 U.S. Preventive Services Task Force (USPSTF) recommendations

TARGET POPULATION

Parents of all infants and children, children, adolescents, and adults seen in primary care settings

INTERVENTIONS AND PRACTICES CONSIDERED

1. Counseling for proper use of motor vehicle occupant restraints (child safety seats, booster seats, and lap-and-shoulder belts)
2. Counseling to reduce driving under the influence of alcohol or riding with drivers who are alcohol-impaired

MAJOR OUTCOMES CONSIDERED

An analytic framework and four (4) key questions were developed to guide evidence review.

Key Question 1: Do primary care behavioral counseling interventions for children, adolescents, and adults to increase the correct use of age- and weight-appropriate restraints or reduce driving/riding with drivers under the influence of alcohol reduce morbidity and/or mortality from motor vehicle occupant injuries?

Key Question 2: Do primary care behavioral counseling interventions for children, adolescents, and adults lead to increased correct use of age- and weight-appropriate restraints?

Key Question 3: Do primary care behavioral counseling interventions for children, adolescents, and adults reduce driving/riding with drivers under the influence of alcohol?

Key Question 4: What are the adverse effects of counseling children, adolescents, and adults to correctly use age- and weight- appropriate restraints and reduce driving/riding with drivers under the influence of alcohol?

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic review of the literature was prepared by the Oregon Evidence-based Practice Center (EPC) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Data Sources

EPC staff considered all studies that were included in the 1996 USPSTF Recommendation and conducted five additional literature searches limited to English language. For the key questions pertaining to occupant restraint use (1 and 2), they searched for relevant studies in MEDLINE, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, PsycINFO, CINAHL, and Traffic Research Information Service (TRIS) published from 1992 to July 2005. They also searched the bibliographies of 4 systematic evidence reviews that addressed the effectiveness of counseling for occupant restraints in pediatric populations. For the key questions addressing counseling about driving while under the influence of alcohol (1 and 3), they considered trials that were included in 3 recent systematic evidence reviews and searched MEDLINE, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, PsycINFO, CINAHL, and TRIS for studies published from 2002 to September 2005 to update the searches conducted for those reports.

In 1996, the USPSTF recommendation did not specifically address the effectiveness of counseling patients about riding with someone who was under the influence of alcohol (key question 3) or the harms of counseling (key question 4). To cover these 2 areas, EPC staff searched MEDLINE, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, PsycINFO, CINAHL, and TRIS for studies published from 1966 to July 2005 and MEDLINE and TRIS for studies published from 1966 to September 2005, respectively. Although no key

questions were related to cost, they searched the National Health Service Economic Evaluation Database for data published from the database's inception through July 2005. Literature searches are described in detail in Appendix Table 2 of the evidence review (see "Availability of Companion Documents" field) and were supplemented with outside source material from experts in the field.

Study Selection

Two authors reviewed each abstract for potential inclusion using the inclusion and exclusion criteria described in Appendix Table 3 in the Evidence Review (see "Availability of Companion Documents" field). EPC staff conducted five searches to cover the separate focus of each key question, and they reviewed all abstracts for potential inclusion for any of the key questions. For all key questions, they included English-language reports of randomized controlled trials (RCTs) or nonrandomized controlled clinical trials (CCTs) and comparative observational studies that included patients of any age and were conducted in the United States or other similarly developed countries. Any intervention that included behavioral counseling as one of its components was considered. Studies were required to report one of the behavioral or health outcomes specified in the key questions and analytic framework, or cost effectiveness outcomes. They excluded studies rated as having poor quality based on the criteria described below.

To be within the scope of the USPSTF, interventions needed to be feasible for, or conducted in, a primary care setting or available for primary care referral. Criteria for deciding if the intervention was feasible for a primary care setting were developed previously by members of the Oregon EPC and the USPSTF. These criteria included 4 domains: 1) how the participant was identified; 2) who delivered the intervention; 3) how the intervention was delivered; and 4) where the intervention was delivered. Appendix Table 4 in the Evidence Review (see "Availability of Companion Documents" field) contains a more detailed description of these domains. For an intervention to be feasible for primary care referral, it was required that it be conducted in a healthcare setting or be widely available in the community at a national level (such as a car-seat-fitting station within a hospital). Studies that enrolled selected populations (e.g., injured or intoxicated patients recruited from an emergency department) that were not representative of patients normally seen in primary care were excluded.

This review did not include programs that counseled risky or harmful alcohol users to reduce alcohol consumption, which was reviewed previously for the USPSTF. Rather, it was required that alcohol-related counseling interventions target general primary care patient populations of any age and specifically advise patients to reduce drinking and driving (not just reduce overall use of alcohol).

NUMBER OF SOURCE DOCUMENTS

Seventeen studies (nine randomized controlled trials [RCTs] and eight controlled clinical trials [CCTs]) reported in 17 articles met inclusion criteria for this review: seven from the 1996 U.S. Preventive Services Task Force (USPSTF) review, six from other systematic reviews or outside sources, and four from searches that were conducted for this review.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus
Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The U.S. Preventive Services Task (USPSTF) Methods Work Group has defined a 3-category rating of "good," "fair," and "poor" based on the following criteria for systematic reviews and randomized controlled trials (RCTs) and cohort studies.

USPSTF Study and Quality Rating Criteria

Systematic Reviews

Quality Rating Criteria

- Comprehensiveness of sources considered or search strategy used
- Standard appraisal of included studies
- Validity of conclusions
- Timeliness and relevance are especially important

Definition of Ratings from above Criteria

Good: Recent, relevant review with comprehensive sources and search strategies; explicit and relevant selection criteria; standard appraisal of included studies; and valid conclusions

Fair: Recent, relevant review that is not clearly biased but lacks comprehensive sources and search strategies

Poor: Outdated, irrelevant, or biased review without systematic search for studies, explicit selection criteria, or standard appraisal of studies

RCTs and Cohort Studies

Quality Rating Criteria

- Initial assembly of comparable groups
    - RCTs: Adequate randomization, including first concealment and whether potential confounders were distributed equally among groups
    - Cohort studies: Consideration of potential confounders with either restriction or measurement for adjustment in the analysis; consideration of inception cohorts
- Maintenance of comparable groups (includes attrition, crossover, adherence, contamination)
- Important differential loss to follow-up or overall high loss to follow-up
- Measurements: equal, reliable, and valid (includes masking of outcome assessment)
- Clear definition of the interventions

- All important outcomes considered
- Analysis: Adjustment for potential confounders for cohort studies or intention-to-treat analysis for RCTs

Definition of Ratings from above Criteria

Good: Meets all criteria: comparable groups are assembled initially and maintained throughout the study (follow-up $80%); reliable and valid measurement instruments are used and are applied equally to the groups; interventions are defined clearly; all important outcomes are considered; and appropriate attention to confounders in analysis. In addition, for RCTs, intention-to-treat analysis is used.

Fair: Any or all of the following problems have occurred, without the fatal flaws noted in the "poor" category below: Generally comparable groups are assembled initially, but some question remains whether some (although not major) differences occurred with follow-up; measurement instruments are acceptable (although not the best) and are generally applied equally; some but not all important outcomes are considered; and some but not all potential confounders are accounted for. Intention-to-treat analysis is done for RCTs.

Poor: Any of the following fatal flaws are present: Groups assembled initially are not close to being comparable or maintained throughout the study, unreliable or invalid measurement instruments are used or are not applied at all equally among groups (including not masking outcome assessment), and key confounders are given little or no attention. For RCTs, intention-to-treat analysis is lacking.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic review of the literature was prepared by the Oregon Evidence-based Practice Center (EPC) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Data Extraction and Quality Assessment

Using the U.S. Preventive Services Task Force's (USPSTF's) study-design specific criteria (see "Rating Scheme for the Strength of the Evidence" field), 2 authors rated the quality of all included studies and those excluded due to quality issues. For randomized controlled trials, criteria included: 1) the initial assembly of comparable groups (based on adequate randomization, including first concealment and whether potential confounders were distributed equally among groups); 2) maintenance of comparable groups (includes attrition, cross-over, adherence, contamination); 3) important differential loss to follow-up or overall high loss to follow-up; 4) equal, reliable, and valid measurements (includes masking of outcome assessment); 5) clear definition of interventions 6) all important outcomes considered; and 7) intention-to-treat analysis. For nonrandomized

controlled trials or cohort studies, the initial assembly of comparable groups was judged based on consideration of potential confounders, with either restriction or measurement for adjustment. In the analyses of results of nonrandomized cohort studies, adjustment for confounders was a quality criterion. The USPSTF Methods Work Group has defined a 3-category rating of "good," "fair," and "poor" based on these criteria. In general, a good-quality study meets all criteria well. A fair-quality study does not meet, or it is not clear that it meets, at least one criterion, but has no known important limitation that could invalidate its results. A poor-quality study has important limitations. The specifications are not meant to be rigid rules. Rather, they are intended to be general guidelines. Individual exceptions, when explicitly explained and justified, can be made. Appendix Table 5 of the Evidence Review (see "Availability of Companion Documents" field) describes the USPSTF quality criteria in detail.

For all included studies, one primary reviewer abstracted relevant information into standardized evidence tables and a second author checked the abstracted data. If the investigators disagreed on study content or quality, a third investigator reviewed the study and the final quality rating was based on agreement between two of the three reviewers. Studies receiving a final quality rating of "poor" (n = 23) were excluded. Major quality problems in studies rated as poor included noncomparable groups at baseline, attrition greater than 40%, and nonblinded outcome assessment by the interventionists or non-standardized outcome assessment. Because many trials had several methodological problems, but were not clearly biased, some included studies were rated as "fair-to-poor quality." In general, fair quality studies reported or matched on some important baseline characteristics, measured outcomes by observation, specified correct use, and had lower attrition. Fair-to-poor quality studies often did not report any baseline characteristics, used self-reported outcomes, did not specify correct use, and had higher attrition rates.

Data Synthesis and Analysis

EPC staff members could not conduct quantitative synthesis for any key question due to heterogeneity of intervention methods, populations addressed, and settings. Instead, they qualitatively synthesized their results within categories focusing first on the age of the population for which Motor Vehicle Occupant Injuries (MVOI) safety behaviors were addressed, and second on the setting in which the population was identified and in which the intervention was delivered. Detailed qualitative summaries are reported in the full evidence report (see "Availability of Companion Documents" field) and are summarized in this review. For interventions targeting child safety seat use, results were also stratified by whether or not the program included a demonstration of correct child safety seat use or increased access through a free or discounted distribution program. Absolute differences with 95% confidence intervals (CI) for use of restraints between the intervention group and the control group were calculated, when sufficient data were reported, using the RISKDIFF option of the FREQ procedure in SAS version 8.2. This procedure uses a normal approximation to the binomial distribution to construct asymptotic confidence intervals (SAS Version 8.2 for Windows, SAS Institute Inc., Cary, North Carolina).

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Balance Sheets
Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

When the overall quality of the evidence is judged to be good or fair, the U.S. Preventive Services Task Force (USPSTF) proceeds to consider the magnitude of net benefit to be expected from implementation of the preventive service. Determining net benefit requires assessing both the magnitude of benefits and the magnitude of harms and weighing the two.

The USPSTF classifies benefits, harms, and net benefits on a 4-point scale: "substantial," "moderate," "small," and "zero/negative."

"Outcomes tables" (similar to "balance sheets") are the USPSTF's standard resource for estimating the magnitude of benefit. These tables, prepared by the topic teams for use at USPSTF meetings, compare the condition specific outcomes expected for a hypothetical primary care population with and without use of the preventive service. These comparisons may be extended to consider only people of specified age or risk groups or other aspects of implementation. Thus, outcomes tables allow the USPSTF to examine directly how the preventive service affects benefits for various groups.

When evidence on harms is available, the topic teams assess its quality in a manner like that for benefits and include adverse events in the outcomes tables. When few harms data are available, the USPSTF does not assume that harms are small or nonexistent. It recognizes a responsibility to consider which harms are likely and judge their potential frequency and the severity that might ensue from implementing the service. It uses whatever evidence exists to construct a general confidence interval on the 4-point scale (e.g., substantial, moderate, small, and zero/negative).

Value judgments are involved in using the information in an outcomes table to rate either benefits or harms on the USPSTF's 4-point scale. Value judgments are also needed to weigh benefits against harms to arrive at a rating of net benefit.

In making its determinations of net benefit, the USPSTF strives to consider what it believes are the general values of most people. It does this with greater confidence for certain outcomes (e.g., death) about which there is little disagreement about undesirability, but it recognizes that the degree of risk people are willing to accept to avert other outcomes (e.g., cataracts) can vary considerably. When the USPSTF perceives that preferences among individuals vary greatly, and that these variations are sufficient to make the trade-off of benefits and harms a "close-call," then it will often assign a C recommendation (see the "Recommendation Rating Scheme" field). This recommendation indicates the decision is likely to be sensitive to individual patient preferences.

The USPSTF uses its assessment of the evidence and magnitude of net benefit to make recommendations. The general principles the USPSTF follows in making recommendations are outlined in Table 5 of the companion document cited below. The USPSTF liaisons on the topic team compose the first drafts of the

recommendations and rationale statements, which the full panel then reviews and edits. Recommendations are based on formal voting procedures that include explicit rules for determining the views of the majority.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

What the United States Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if there are other considerations in support of the offering/providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality or conflicting, and the balance of benefits and harms cannot be determined.	Read "Clinical Considerations" section of USPSTF Recommendation Statement (see "Major Recommendations" field). If offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The U.S. Preventive Services Task Force defines certainty as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF

assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as: • the number, size, or quality of individual studies; • inconsistency of findings across individual studies; • limited generalizability of findings to routine primary care practice; or • lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • the limited number or size of studies; • important flaws in study design or methods; • inconsistency of findings across individual studies • gaps in the chain of evidence; • findings not generalizable to routine primary care practice; or • a lack of information on important health outcomes. More information may allow an estimation of effects on health outcomes.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Peer Review. Before the U.S. Preventive Services Task Force makes its final determinations about recommendations on a given preventive service, the

Evidence-based Practice Center and the Agency for Healthcare Research and Quality send a draft systematic evidence review to 4 to 6 external experts and to federal agencies and professional and disease-based health organizations with interests in the topic. They ask the experts to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the Task Force in memo form. In this way, the Task Force can consider these external comments and a final version of the systematic review before it votes on its recommendations about the service. Draft recommendation statements are then circulated for comment from reviewers representing professional societies, voluntary organizations and Federal agencies. These comments are discussed before the final recommendations are confirmed.

Comparison with Guidelines from Other Groups. Recommendations from the following groups were discussed: the Centers for Disease Control and Prevention (CDC), the American Academy of Family Physicians (AAFP), the American Medical Association (AMA), the American Academy of Pediatrics (AAP), the American College of Obstetrics and Gynecology (ACOG), and the National Highway Traffic Safety Administration (NHTSA).

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and identifies the Levels of Certainty regarding Net Benefit (High, Moderate, and Low). The definitions of these grades can be found at the end of the "Major Recommendations" field.

Summary of the Recommendations

Recommendation 1: Counseling about Proper Use of Motor Vehicle Occupant Restraints to Prevent Motor Vehicle Occupant Injuries (MVOIs)

The USPSTF concludes that the current evidence is insufficient to assess the incremental benefit, beyond the efficacy of legislation and community based interventions, of counseling in the primary care setting, in improving rates of proper use of motor vehicle occupant restraints (child safety seats, booster seats, and lap-and-shoulder belts). (See Clinical Considerations section below for definitions of proper use.) This is an **I statement.**

Recommendation 2: Counseling to Prevent Alcohol-related MVOI in Adolescents and Adults

The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of routine counseling of all patients in the primary care setting to reduce driving while under the influence of alcohol or riding with drivers who are alcohol-impaired. This is an **I statement.**

Clinical Considerations

Patient Population

This recommendation refers to behavioral counseling interventions performed in the primary care setting, addressing parents of all infants and children, children, adolescents, and adults.

Elements of Effective Counseling Interventions

The injury prevention benefits of child safety seat and booster seat use require proper use. (That is, the seats should be age- and weight-appropriate and should be installed and placed into the vehicle correctly.) Infants younger than 1 year of age and weighing less than 20 pounds should be placed in rear-facing, infant-only car safety seats or convertible seats positioned in the back seat. Infants younger than 1 year of age and weighing between 20 and 35 pounds should be placed in rear-facing convertible seats positioned in the back seat. Rear-facing child safety seats must not be placed in the front passenger seat of any vehicle that is equipped with an airbag on the front passenger side. Death or serious injury can result from the impact of the airbag against the child safety seat. Toddlers 1 to 4 years of age weighing 20 to 40 pounds should be restrained in a forward-facing convertible seat or forward-facing only seat positioned in the back seat. Young children 4 to 8 years of age and up to 4'9" (57 inches) in height should be placed in a booster seat in the back seat. After this age (or height), lap-and-shoulder belt use is appropriate. Children younger than 13 years of age should sit in the back seat with lap-and-shoulder belts.

Behavioral counseling interventions that include an educational component, as well as a demonstration of use or a distribution component, are more effective than those that include education alone.

Other Approaches to Prevention

Clinical counseling in conjunction with community-based interventions has been effective in increasing proper use of child safety seats. Over the past decade, legislation and enforcement have contributed substantially to the increasing trends in child safety seat and seat belt usage. A comprehensive strategy that includes community-based interventions, primary care counseling in the primary care setting, legislation, and enforcement is critical to the improvement of proper safety restraint usage and decrease in the incidence of MVOI.

Other Relevant USPSTF Recommendations

The USPSTF currently recommends screening for alcohol misuse and counseling targeted to those patients identified as risky or harmful drinkers (see the National Guideline Clearinghouse [NGC] summary of the USPSTF recommendations on Screening and behavioral counseling interventions in primary care to reduce alcohol misuse.

Definitions:

What the United States Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
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B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if there are other considerations in support of the offering/providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality or conflicting, and the balance of benefits and harms cannot be determined.	Read "Clinical Considerations" section of USPSTF Recommendation Statement (see "Major Recommendations" field). If offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The U.S. Preventive Services Task Force defines certainty as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as: • the number, size, or quality of individual studies;

Level of Certainty	Description
	• inconsistency of findings across individual studies; • limited generalizability of findings to routine primary care practice; or • lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • the limited number or size of studies; • important flaws in study design or methods; • inconsistency of findings across individual studies • gaps in the chain of evidence; • findings not generalizable to routine primary care practice; or • a lack of information on important health outcomes. More information may allow an estimation of effects on health outcomes.

CLINICAL ALGORITHM(S)

None available

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Effectiveness of Counseling to Change Behavior

Counseling about Proper Use of Motor Vehicle Occupant Restraints

Legislation and community-based interventions along with counseling in primary care settings have dramatically increased the use of motor vehicle occupant restraints and have reduced the incidence of motor-vehicle occupant injuries (MVOIs) in all populations. However, the incremental benefit of primary care counseling for general restraint use in the context of legislation and community interventions is unknown. There is insufficient evidence addressing the efficacy of counseling in the primary care setting to increase the proper use of motor vehicle

occupant restraints in the current high-use environment. This constitutes a critical gap in the evidence for counseling.

Counseling to Prevent Alcohol-Related MVOIs in Adolescents and Children

There is evidence that screening for misuse of alcohol and targeted counseling of those persons who screen positive reduce alcohol consumption and alcohol-related MVOI. However, there is a critical gap in the evidence of the efficacy of behavioral counseling interventions directed to all patients in the primary care setting to reduce driving while under the influence of alcohol or riding with drivers who are alcohol-impaired.

POTENTIAL HARMS

Harms of Counseling

Counseling about Proper Use of Motor Vehicle Occupant Restraints

There is no evidence addressing the harms of counseling; however, these potential harms are estimated to be none or minimal in magnitude.

Counseling to Prevent Alcohol-Related Motor-Vehicle Occupant Injuries (MVOIs) in Adolescents and Children

There is no evidence addressing the harms of counseling to prevent alcohol-related MVOI; however, these potential harms are estimated to be none or minimal in magnitude.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- The U.S. Preventive Services Task Force (USPSTF) makes recommendations about preventive care services for patients without recognized signs or symptoms of the target condition.
- Recommendations are based on a systematic review of the evidence of the benefits and harms and an assessment of the net benefit of the service.
- The USPSTF recognizes that clinical or policy decisions involve more considerations than this body of evidence alone. Clinicians and policymakers should understand the evidence but individualize decision making to the specific patient or situation.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical recommendations. Practice guidelines are relatively weak tools for changing

clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the Agency for Healthcare Research and Quality will make all U.S. Preventive Services Task Force (USPSTF) products available through its Web site. The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access U.S. Preventive Services Task Force materials and adapt them for their local needs. Online access to U.S. Preventive Services Task Force products also opens up new possibilities for the appearance of the annual, pocket-size *Guide to Clinical Preventive Services*.

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals, and test results are not always centralized.

IMPLEMENTATION TOOLS

Foreign Language Translations
Patient Resources
Personal Digital Assistant (PDA) Downloads
Pocket Guide/Reference Cards
Quick Reference Guides/Physician Guides
Tool Kits

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

U.S. Preventive Services Task Force. Counseling about proper use of motor vehicle occupant restraints and avoidance of alcohol use while driving: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med 2007 Aug 7;147(3):187-93. PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 (revised 2007 Aug 7)

GUIDELINE DEVELOPER(S)

United States Preventive Services Task Force - Independent Expert Panel

GUIDELINE DEVELOPER COMMENT

The U.S. Preventive Services Task Force (USPSTF) is a federally-appointed panel of independent experts. Conclusions of the U.S. Preventive Services Task Force do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or its agencies.

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

U.S. Preventive Services Task Force (USPSTF)

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

*Task Force Members**: Ned Calonge, MD, MPH, Chair (Colorado Department of Public Health and Environment, Denver, Colorado); Diana B. Petitti, MD, MPH, Vice Chair (Kaiser Permanente Southern California, Pasadena, California); Thomas G. DeWitt, MD (Children's Hospital Medical Center, Cincinnati, Ohio); Leon Gordis, MD, MPH, DrPH (Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland); Kimberly D. Gregory, MD, MPH (Cedars-Sinai Medical Center, Los Angeles, California); Russell Harris, MD, MPH (University of North Carolina School of Medicine, Chapel Hill, North Carolina); Kenneth W. Kizer, MD, MPH (National Quality Forum, Washington, DC); Michael L. LeFevre, MD, MSPH (University of Missouri School of Medicine, Columbia, Missouri); Carol Loveland-Cherry, PhD, RN (University of Michigan School of Nursing, Ann Arbor, Michigan); Lucy N. Marion, PhD, RN (Medical College of Georgia, Augusta, Georgia); Virginia A. Moyer, MD, MPH (University of Texas Health Science Center, Houston, Texas); Judith K. Ockene, PhD (University of Massachusetts Medical School, Worcester, Massachusetts); George F. Sawaya, MD (University of California, San Francisco, San Francisco, California); Albert L. Siu, MD, MSPH (Mount Sinai Medical Center, New York, New York); Steven M. Teutsch, MD, MPH (Merck & Company, West Point, Pennsylvania); and Barbara P. Yawn, MD, MSc (Olmsted Research Center, Rochester, Minnesota).

**Members of the Task Force at the time this recommendation was finalized. For a list of current Task Force members, go to www.ahrq.gov/clinic/uspstfab.htm.*

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: U.S. Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Baltimore (MD): Williams & Wilkins; 1996. Chapter 57, Counseling to prevent motor vehicle injuries. p. 643-58. [201 references]

GUIDELINE AVAILABILITY

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site. Also available from the Annals of Internal Medicine Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

Evidence Reviews:

- Williams SB, Whitlock EP, Edgerton EA, Smith PR, Beil TL. Counseling about proper use of motor vehicle occupant restraints and avoidance of alcohol use while driving: a systematic evidence review for the U.S. Preventive Services Task Force. Ann Intern Med 2007 Aug 7;147(3):194-206. Electronic copies: Available in Portable Document Format (PDF) from the U.S. Preventive Services Task Force (USPSTF) Web site. Also available from the Annals of Internal Medicine Web site
- Williams S, Whitlock E, Smith P, Edgerton B, Beil T. Primary care interventions to prevent motor vehicle occupant injuries. Evidence synthesis number 51. 2007 Aug. 100 p. Electronic copies: Available in Portable Document Format (PDF) from the U.S. Preventive Services Task Force (USPSTF) Web site.
- Primary care counseling for proper use of motor vehicle occupant restraints: clinical summary of U.S. Preventive Services Task Force recommendations. 2007. Electronic copies: Available in Portable Document Format (PDF) from the U.S. Preventive Services Task Force (USPSTF) Web site.

Background Articles:

- Barton M et al. How to Read the new Recommendation Statement: Methods Update from the U.S. Preventive Services Task Force. Ann Intern Med. 2007;147:123-127.
- Guirguis-Blake J et al. Current Processes of the U.S. Preventive Services Task Force: Refining Evidence-Based Recommendation Development. Ann Intern Med 2007;147:117-122.
- Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

Electronic copies: Available from U.S. Preventive Services Task Force (USPSTF) Web site.

The following is also available:

- The guide to clinical preventive services, 2006. Recommendations of the U.S. Preventive Services Task Force. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2006. 228 p. Electronic copies available from the AHRQ Web site.
- A step-by-step guide to delivering clinical preventive services: a systems approach. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2002 May. 189 p. Electronic copies available from the AHRQ Web site. See the related QualityTool summary on the Health Care Innovations Exchange Web site.

Print copies: Available from the Agency for Healthcare Research and Quality Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

The Electronic Preventive Services Selector (ePSS), available as a PDA application and a web-based tool, is a quick hands-on tool designed to help primary care clinicians identify the screening, counseling, and preventive medication services that are appropriate for their patients. It is based on current recommendations of the USPSTF and can be searched by specific patient characteristics such as age, sex, and selected behavioral risk factors.

PATIENT RESOURCES

The following are available:

- The Pocket Guide to Good Health for Adults. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003. Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site. Copies also available in Spanish from the USPSTF Web site.
- Men: Stay Healthy at Any Age – Checklist for Your Next Checkup. Rockville (MD): Agency for Healthcare Research and Quality. AHRQ Pub. No. 07-IP006-A. February 2007. Electronic copies: Available from the USPSTF Web site.
- Women: Stay Healthy at Any Age – Checklist for Your Net Checkup. Rockville (MD): Agency for Healthcare Research and Quality. AHRQ Pub. No. 07-IP005-A. February 2007. Electronic copies: Available from the USPSTF Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

The following is also available:

- Counseling during doctors' visits to prevent motor vehicle injuries: recommendations from the U.S. Preventive Services Task Force. Ann Intern Med 2007 Aug 7;147(3):I-32. Electronic copies: Available from the Annals of Internal Medicine Web site

NGC STATUS

This NGC summary was completed by ECRI Institute on July 30, 2007. The information was verified by the guideline developer on August 3, 2007.

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Research), 540 Gaither Road, Rockville, MD 20850. Facsimile: 301-427-1873. E-mail: Randie.siegel@ahrq.hhs.gov.

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